earnestly solicited.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT OF THE DISCLOSURE

The Abstract of the Disclosure has been amended as follows:

--[This invention is directed to a] A radio station and a data packet transmitting/receiving method for carrying out transmitting/receiving operations of data by radio. [At an] An identification packet generating section [(14), such an approach is employed to generate] generates an identification packet having a data format in which a broadcast address is caused to be a destination address and [MAC] a media access control address of a corresponding data station is caused to be a source address to send out [such] a packet to a wireless network and to [thereby] detect a loop to hold normal a communication state.--

IN THE CLAIMS

Claims 1-19 have been amended as follows:

--1. (Amended) A radio station connected[,] by wire[,] to a first wire network [composed of plural] including a first plurality of pieces of communication terminal [equipments] equipment connected [to each other] by wire and connected[,] by radio[,] to a second wire network [composed of plural] including a second plurality of pieces of communication

terminal [equipments] equipment connected [to each other] by wire[,] and adapted for [transmitting/receiving] transmitting and receiving a plurality of communication data packets,

the radio station comprising:

identification packet generating means for generating an identification packet having a predetermined form of the communication data packets;

wireless communication means for [transmitting/receiving] transmitting and receiving the plurality of communication data packets between the wireless communication means and the second wire network;

wire communication means for [transmitting/receiving] transmitting and receiving the plurality of communication data packets between the wire communication means and the first wire network;

identification packet detecting means for detecting the identification packet generated [at] by the identification packet generating means; and

control means for controlling the identification packet generating means to generate the identification packet[,] and for controlling the identification packet detecting means to detect the identification packet.

--2. (Amended) The radio station as set forth in claim 1, wherein the control means changes a communication mode [(form)] in the wireless communication means when the identification packet is detected [at] by the identification packet detecting

means.

--3. (Amended) The radio station as set forth in claim 2, [which comprises] further comprising selector means for selecting a wireless communication channel [used] for [transmitting/receiving operations of] transmitting and receiving the plurality of communication data [packet] packets from [plural] a plurality of wireless communication channels,

wherein the control means selects [the] a wireless communication channel at the selector means to [thereby] change the communication mode.

--4. (Amended) The radio station as set forth in claim 2, [which comprises] further comprising ciphering means for enciphering[, on the basis of cipher key,] each of the plurality of communication data [packet transmitted/received] packets transmitted and received by radio between the ciphering means and the second wire network based on a cipher key,

wherein the control means changes the cipher key at the ciphering means to [thereby] change the communication mode.

--5. (Amended) The radio station as set forth in claim 1, wherein each of the plurality of communication data [packet] packets includes a wire destination address portion indicating one piece of communication terminal equipment of the first and the second pluralities of pieces of communication terminal equipment serving as a destination of the communication data

packet [of the plural communication terminal equipments within the first wire network and the plural communication terminal equipments within the second wire network,] and a wire transmit source address portion indicating one piece of communication terminal equipment of the first and second pluralities of pieces of communication terminal equipment serving as a transmit source of the communication data packet, [and]

wherein the identification packet detecting means sets [the same address with respect to] the wire destination address portion [and] equal to the wire transmit source address portion.

--6. (Amended) The data station as set forth in claim 5, wherein the wire destination address portion and the wire transmit source address portion are [respectively] each addresses of the [data] radio station.

--7. (Amended) The [data] radio station as set forth in claim 1, [which comprises] further comprising wireless address adding means for adding a wireless destination address portion indicating a destination when [transmitting/receiving] transmitting and receiving operations are [carried out] performed by radio and a wireless transmit source address portion indicating a transmit source when [transmitting/ receiving] the transmitting and the receiving operations are [carried out] performed by radio to each of the plurality of communication data [packet] packets sent [out] from the

wireless communication means to the second wire network.

--8. (Amended) The radio station as set forth in claim 7, wherein the wireless destination address portion of the identification packet [is] includes broadcast addresses in which [respective ones] each of [plural] the plurality of pieces of communication terminal [equipments] equipment connected to the radio station and [respective ones] each of [plural] the plurality of pieces of communication terminal [equipments] equipment connected to the wire network are [caused to be] the destination.

--9. (Amended) A data packet [transmitting/receiving] transmitting and receiving method of [transmitting/receiving] transmitting and receiving a plurality of communication data packets by radio between a first radio station connected to a first wire network [composed of plural] including a first plurality of pieces of communication terminal [equipments] equipment connected [to each other] by wire and a second radio station connected to a second wire network [composed of plural] including a second plurality of communication terminal [equipments] equipment connected [to each other] by wire,

the [data packet transmitting/receiving] method comprising the steps of:

[an identification packet generation step in which the first radio station generates] generating an identification packet, the generation performed by the first radio station and

the identification packet having a predetermined form of each of the plurality of communication data packets;

[a transmitting step in which the first radio station transmits] transmitting the identification packet generated [at] in the identification packet generation step [into] to one of the first wire network [or to] and the second radio station, the transmission performed by the first radio station;

[a discrimination step in which the first radio station discriminates as to] determining whether [or not] the communication data packet received from one of the second radio station [or] and the first wire network is the identification packet, the determination performed by the first radio station; and

[a step in which in the case where the communication data packet is the identification packet, the first radio station changes] changing a communication mode between the first radio station and the second radio station when the communication data packet is the identification packet.

--10. (Amended) The data packet [transmitting/receiving] transmitting and receiving method as set forth in claim 9, [which comprises a selection] further comprising the step of selecting a wireless communication channel [used] for transmission of the communication data packet from [plural] a plurality of wireless communication channels[,

thus] to change the communication mode based on [the basis of] the wireless communication channel selected [at] in the

selection step.

--11. (Amended) The data packet [transmitting/receiving] transmitting and receiving method as set forth in claim 9, [which comprises a ciphering] further comprising the step of enciphering the communication data packet based on [the basis of] a cipher key[,

thus] to change the communication mode based on [the basis of] the cipher key used [at] in the ciphering step.

--12. (Amended) The data packet [transmitting/receiving] transmitting and receiving method as set forth in claim 9, wherein[, at] in the identification packet generation step[,] the identification packet is generated [in a manner] including a wire destination address portion indicating one piece of communication terminal equipment of the first and the second pluralities of communication terminal equipment serving as a destination of the communication data packet and a wire transmit source address portion indicating one piece of communication terminal equipment of the first and the second pluralities of communication terminal equipment [of] as a transmit source [of the communication terminal equipments connected to the first wire network and the second wire network, thus] to set [the] a same address with respect to the wire destination address portion and the wire transmit source address portion.

--13. (Amended) The data packet [transmitting/receiving] transmitting and receiving method as set forth in claim 9, wherein[, at the transmitting step,] when the identification packet is transmitted to the second radio station[,] the wireless destination address portion serving as the destination when [transmitting/receiving] the transmitting and receiving operations are [carried out] performed by radio and the wireless transmit source address portion serving as the transmit source when [transmitting/receiving] the transmitting and receiving operations are [carried out] performed by radio are added to the identification packet.

--14. (Amended) A communication data packet [transmitted/received] transmitted and received by radio between a first radio station connected to a first wire network [composed] including a first plurality of [plural] pieces of communication terminal [equipments] equipment connected [to each other] by wire and a second radio station connected to a second wire network [composed] including a second plurality of [plural] pieces of communication terminal [equipments] equipment connected [to each other] by wire,

the communication data packet including:

a destination address signal in which a destination address [indicating] indicates a transmit destination [indicates all] to each of the first and the second pluralities of pieces of communication terminal [equipments] equipment connected to the first wire network and the second wire

network;

a wireless transmit source address signal indicating [communication terminal equipment of] a transmit source to each of the first and second pluralities of pieces of communication terminal equipment when [transmitting/receiving] transmitting and receiving operations are [carried out] performed by radio;

a wire destination address signal indicating [communication terminal equipment of] the transmit destination of the [plural] first plurality of pieces of communication terminal [equipments] equipment connected to the first wire network and the second plurality of pieces of communication terminal equipment connected to the second network; and

a wire transmit source address signal indicating [communication terminal equipment of] the transmit source of the [plural] first plurality of communication terminal [equipments] equipment connected to first wire network and the second plurality of pieces of communication terminal equipment connected to the second wire network,

wherein the wire transmit source address signal is [the same as] equal to the wire destination address signal.

--15. (Amended) The communication data packet as set forth in claim 14, wherein the wire destination address signal is an address of the [data] radio station [which] that sends out the communication data packet.

--16. (Amended) A wireless network system of

[transmitting/receiving] transmitting and receiving a plurality of communication data packets between a first radio station connected to a first wire network [composed of plural] including a first plurality of pieces of communication terminal [equipments] equipment connected [to each other] by wire and a second radio station connected to a second wire network [composed of] including a second plurality of pieces of communication terminal [equipments] equipment connected [to each other] by wire,

wherein the radio station comprises: identification packet generating means for generating an identification packet [which] that is a communication data packet having a predetermined signal form[,]; and identification packet detecting means for detecting the identification packet from the plurality of communication data packets.

--17. (Amended) The wireless network system as set forth in claim 16, wherein a communication mode between the first radio station [connected to the first wire network] and the second radio station [connected to the second wire network] is changed based on [the basis of] a detection result of the identification packet detecting means.

--18. (Amended) A wireless network apparatus [adapted] for [carrying out, by radio,] performing transmission of a plurality of communication data packets between a first wire network and a second wire network by radio,

the wireless network apparatus comprising:

loop detection packet generating means for generating each of the plurality of communication data [packet] packets of a predetermined form for detecting a loop of the communication data packet; and

detecting means for detecting the loop detection packet from a plurality of received communication data [packet] packets.

--19. (Amended) The wireless network apparatus as set forth in claim 18, wherein a communication mode is changed based on [the basis of] a detection result of the detecting means.--